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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,698	01/09/2002	Isaac Bentolila	MET1.0002	7739

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EXAMINER
JOHNSON, ALAN M

ART UNIT	PAPER NUMBER
2623	

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/043,698	BENTOLILA ET AL.
	Examiner	Art Unit	
	Alan M. Johnson	2623	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL.**   2b)☒ This action is non-final..

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle,* 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-15* is/are pending in the application.

　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-15* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

　　a)☐ All b)☐ Some * c)☐ None of:

　　　1.☐ Certified copies of the priority documents have been received.

　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.

　　　3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
　　Paper No(s)/Mail Date <u>10/24/02</u>.

4) ☐ Interview Summary (PTO-413)
　　Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 101

1.   35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 8-15 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 8-15 recite "a machine-readable medium having stored...processor executable instructions" that is a functional descriptive material (i.e. data structures). Data structures not claimed as embodied in a computer-readable medium are descriptive material per se and are not statutory because they are not capable of causing functional change in the computer.   The data structure does not define any structural and functional interrelationships between the data and other claimed aspects of the invention which permit the data structure's functionality to be realized. In contrast, a claimed computer-readable medium encoded with a computer program is a computer element which defines structural and functional interrelationships between the computer program and the rest of the computer which permit the computer programs functionality to be realized.

Claim Rejections - 35 USC § 102

2.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that

form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3.   Claims 1-5 and 8-13 are rejected under 35 U.S.C. 102(e) as being anticipated by

Grauch (US2005/0235318A1).

As for claim 1, Grauch discloses a method of determining a television viewer's

viewing habits comprising:

recording a viewer's monitor behavior with data item variables selected from the

group consisting of watch channel (channel ID, paragraph 56);

inputting historical data information regarding demographic information tagged to

the viewer (the MKIS data base stores' demographics, paragraph 96, particular

ads are targeted to particular demographic households which demonstrates that

the historical information is tagged to the viewer of that household, otherwise the

targeted ad would not be displayed to the intended viewer, paragraph 98 and

paragraph 99);

inputting program guide information (collecting the EPG information is part of the

journal collection data that creates a model of the viewer behavior, paragraph

60);

and associating the program guide information with the viewer's monitor behavior

and defining therefrom a knowledge base with demographic cluster information

of the viewer in terms of statistical state machine transition models (The event

records are collected and stored in buffers, paragraph 65, the data is then

uploaded, paragraph 68, the uploaded event data is then merged and parsed

with metadata in order to create an accurate time line, paragraphs 86-88, once

the data is uploaded analysis may be run for a particular demographic cluster

paragraph 98).

Considering claim 2, Grauch discloses a method wherein the step of defining the

knowledge base comprises calculating a parameterized transition matrix defining the

viewer's viewing habits, the transition matrix containing information of program

transitions initiated by the viewer (Clickstream Data 80 Figure 7 and paragraph 95).

Dealing with claim 3, Grauch discloses a method of defining at least two

concurrent transition matrices including a channel matrix (Clickstream Data 80 Channel

ID, Figure 7) and a genre matrix (Content ID Prevue Guide Data 82, Figure 7).

In regard to claim 4, Grauch discloses a method which comprises defining the

transition matrix as a two-dimensional matrix with transitions from television channels to

television channels in temporal form (Figure 7 and paragraph 95).

With respect to claim 5, Grauch discloses a method which comprises providing

feedback information with the viewer's monitor behavior by recording a click stream

(receiving messages from the user input device, paragraph 36 and log all events,

paragraph 40).

Considering claim 8, Grauch discloses a machine-readable medium (paragraph

33) having stored thereon a plurality of processor-executable instructions for

implementing a function of:

capturing state transitions (Figure 7) by defining monitor behavior in a plurality of

statistical state machine families each representing a given viewer or

demographic group viewing behavior (statistically provisioned paragraph 65, and

paragraph 95);

combining the statistical state machine families into global statistical state

machines defined in a global probability density function (100 Fig. 1 and event

records are collected and analyzed paragraph 81),

and outputting a global profile based on the global probability density function,

wherein the global profile is suitable for determining programming content of a

television server (the system targets demographic groups that use the system

paragraph 98 - 99).

Dealing with claim 9, Grauch discloses state transitions represent a television

viewer's monitor behavior and the statistical state machines are selected from the group

consisting of watch start time (Figure 7 and paragraph 95).

With respect to claim 10, Grauch discloses the global profile that represents

demographic cluster information of the viewer in terms of the statistical state machine

transition models (Figure 7 and the information collected is what the system uses to

determine demographic groups, paragraph 95, and particular demographic group

means the same thing as a cluster of users paragraph 98).

Dealing with claim 11, Grauch discloses a machine readable medium wherein

the state machines are defined in a parameterized transition matrix defining the viewer's

viewing habits, the transition matrix containing information of program transitions

initiated by the viewer (clickstream Data 80 Figure 7 and paragraph 95).

Considering claim 12, Grauch discloses a machine readable medium wherein the transition matrix is one of at least two concurrent transition matrices including a channel matrix (Clickstream Data 80 Channel ID, Figure 7) and a genre matrix (Content ID Prevue Guide Data 82, Figure 7).

In regard to claim 13, Grauch discloses the machine readable medium wherein the transition matrix is a two-dimensional matrix with transitions from television channels to television channels in temporal form (Figure 7 and paragraph 95).

Claim Rejections - 35 USC § 103

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 6, 7, 14 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grauch in view of Konig (6,981,040).

As for claims 6 and 14, Grauch fails to specifically teach the method and corresponding machine readable medium which comprises parameterizing the viewer's monitor behavior with a double random pseudo hidden Markov process, and defining a low-level statistical state machine modeling a behavioral cluster and a top-level

statistical state machine with active behavioral clusters and an interaction between the

active behavioral clusters.

However in an analogous art Konig discloses parameterizing the viewer's monitor

behavior with a double random pseudo hidden Markov process (Hidden Markov Model,

column 28 lines 14-18),

and defining a low-level statistical state machine modeling a behavioral cluster

(any individual user model can also apply to a cluster of users, column 14 lines 61-52,

user response is monitored, column 27 lines 1-11 and column 27 lines 49-55),

and a top-level statistical state machine with active behavioral clusters and an

interaction between the active behavioral clusters (the documents are evaluated using

the user model to estimate the user interest column 29 lines 49-52).

It would have been obvious to one of ordinary skill in the art to modify Grauch's

system to include parameterizing the viewer's monitor behavior with a double random

pseudo hidden Markov process, and defining a low-level statistical state machine

modeling a behavioral cluster and a top-level statistical state machine with active

behavioral clusters and an interaction between the active behavioral clusters, as taught

by Konig, for the benefit of allowing the system to make accurate models of viewer

usage in order to target the most relevant material towards the desired user or cluster of users.

Considering claims 7 and 15, Grauch discloses a method and corresponding machine readable medium which comprises defining a plurality of dimensions and determining parallel statistical state machine transition events in at least two of three state categories including channel, genre, and title (channel ID and content ID Figure 7 and paragraph 95).

Grauch fails to specifically teach the double random process.

However, in an analogous art Konig discloses the double random process (Hidden Markov Model, column 28 lines 17-18).

It would have been obvious to one of ordinary skill in the art to modify Grauch's system to include the double random process, as taught by Konig, for the benefit of making one overall probabilistic decision when constructing user models.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan M. Johnson whose telephone number is (571)272-7916. The examiner can normally be reached on 8am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Christopher C. Grant can be reached on (571)272-7294. The fax phone

number for the organization where this application or proceeding is assigned is 571-

273-8300.

Information regarding the status of an application may be obtained from the

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Business Center (EBC) at 866-217-9197 (toll-free).

AJ

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